

Nordic eScience Actions

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National eScience Initiatives – Nordic countries



Sweden - Strategic Research Area Initiatives

- 2010 – 2016 → and indefinitely
- eSSENCE, SERC

Norway – The eVITA Program (also eInfrastructure)

- 2006 – 2015
- 2016 – 2018 Same amount of eScience funding within a new ICT program

Finland – The LASTU (Computational Science) Program

- 2010 – 2016
- Several new actions coming up. Close connection eScience – Open Science

Denmark – Support to individual groups

- Now established eScience group within DeIC

Iceland - Support to individual groups



Nordic eScience/eInfrastructure



NordForsk

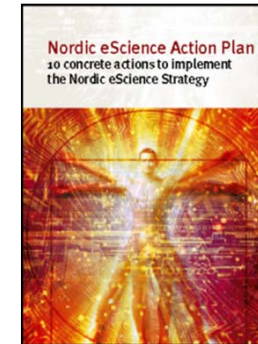
Activities in the Nordic countries

- e-Science research
- e-Science education
- e-Infrastructure

Collaborative efforts,
and joint/coordinated
participation in e.g.
EU initiatives

Way back

Nordic eScience
Action Plan (1.0)



NeGI
NeIC

Nordic eScience
Action Plan 2.0



Now

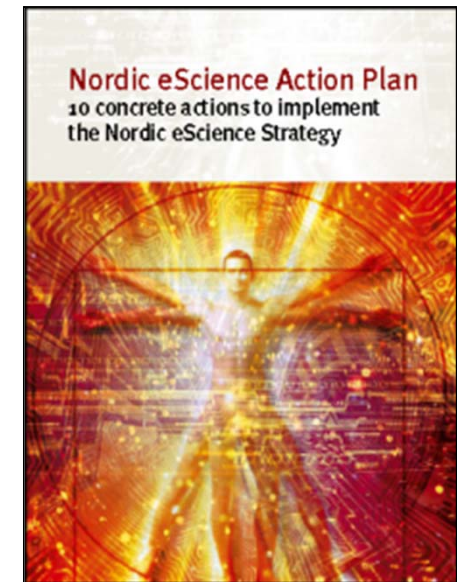
Great future!

eNORIA Action Plan 1.0



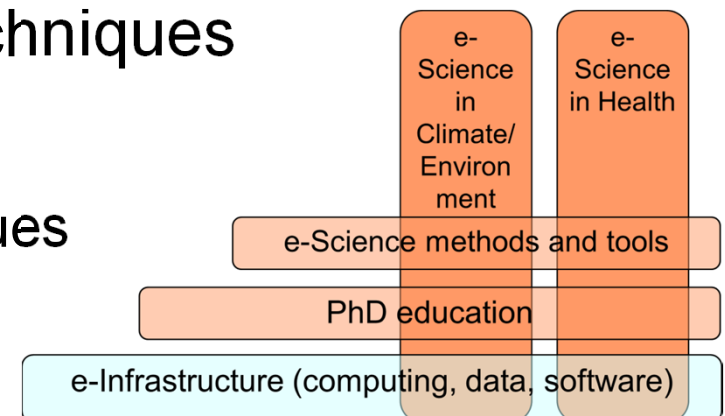
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- Training Researchers in e-Science Tools and Methods
- A Nordic e-Science Masters Education
- Sharing and Specialising Nordic e-Science Educational Modules
- Fostering Nordic e-Science Collaboration through Mobility
- A Nordic e-Science Program for Research into Grand Challenges
- Strengthening National e-Science Initiatives
- Open Access to National Data Repositories
- Facilitating Sustainable Grid Infrastructure Collaboration
- Implementing Cross-Border Sharing of Resources
- Environmentally-Friendly Nordic High Performance Computing



The Nordic e-Science Globalisation Initiative – NeGI

- Time-limited effort, total funding 12,5 MEUR
 - National agencies in FI, NO, SE, NordForsk, Nordic Council of Ministers
 - Steering Committee with owners + observers from DK and IS
- Nordic Centers of Excellence: "e-climate/environment" and "e-health".
 - Three centers started 2014-01-01. 8,5 MEUR
- Research Projects: e-Science tools and techniques
 - Three projects started during 2015. 1,5 MEUR
- Graduate Courses in eScience tools and techniques
 - Call closed yesterday, 0,8 MEUR



- Evaluation of Nordic research collaboration presented 2012:
”Sammantaget visar exemplet med eScience/eInfrastruktur hur framgångsrikt nordiskt samarbete kan byggas underifrån [...]”
- End of 2012: Mandate from Nordic Council of Ministers to produce a new version of the Nordic eScience Action Plan
 - Expert Group + Project Leader (SH)
 - Action Plan 2.0 completed during 2014, submitted to NCM
 - Sept. 2015: NCM asks NordForsk to implement the new plan

The Nordic eScience Action Plan 2.0



- Introduction
- Objective and Mission
- Rephrasing and Summary of Strategy
- Organisational framework for Nordic Collaboration on eScience and eInfrastructure – including international outlook
- **Action Line A. Creating a Higher Education Arena for eScience**
 - 2 actions (was 4)
- **Action Line B. Enabling eScience as an Omnipresent Tool in Research**
 - 3 actions (was 2)
- **Action Line C. Knowledge Creation through Cross-Border Sharing of eInfrastructure**
 - 5 actions (was 4)

Nordic eScience Action Plan 2.0



1. Training researchers in eScience tools and methods
2. Fostering Nordic eScience collaboration through mobility
3. Strengthening eScience aspects of Nordic research
4. Nordic research on eScience methods and software
5. Nordic pilot projects within Open Science
6. Nordic sharing and exchange of eInfrastructure resources
7. A Nordic federated cloud
8. Nordic high performance computing collaboration
9. Nordic eInfrastructure for sensitive data
10. Nordic eInfrastructure for scientific software

Some highlighted issues...



A focus on

- Nordic added value in an international context
 - Strong eScience/eInfrastructure activities
- Synergies with other Nordic initiatives...
- ... and exploring areas that can strengthen the Nordics
 - Multidisciplinary approaches
 - Critical mass
- Collaboration for even better Nordic research in the future
 - Open Access / Open Science / Science 2.0
 - Connection Research – Education – Research Infrastructures

Action Line A



Action 1. Training Researchers in eScience Tools and Methods

- On-Going Pilot Action: NeGI call for graduate courses within eScience tools and techniques.
- Evaluation of the NeGI effort.
- Build a sustainable platform for Nordic open graduate education in eScience, covering also new eScience fields in e.g. the humanities and social sciences
 - Special focus on cross-disciplinary data science, preparing Nordic PhDs for taking a lead in future data-intensive research and development within and outside academia.

Action 2. Fostering Nordic eScience Collaboration through Mobility

- Mobility platform to support shorter visits for students and young researchers. Integrated in relevant European mobility initiatives.
- **Planned Pilot Action: Small directed call for the NeGI efforts within climate and environment research with a specific emphasis on participation in European mobility program such as Marie Skłodowska-Curie.**

Action 3. Strengthening eScience Aspects of Nordic Research

- eScience aspects of Nordic research efforts will be emphasised, eScience will be introduced as a mainstream mode of Nordic research.
 - Descriptions of how eScience techniques can be used to strengthen the impact of Nordic research efforts will be included in the specifications of research programs and projects, and eScience aspects will be stressed in evaluation procedures and grant agreements.
- **Pilot Action: Discussion on how to benefit from including aspects of eScience/Data Science in the Nordic Program *Gender in Research* (about to be started)**

Action Line B



Action 4. Nordic research on eScience Methods and Software

- Aim: Establish a joint research program to address research on methods and application software for Nordic research, underpinning the eScience component of research programs and projects and strengthening areas where added value of joint Nordic efforts can be found.
- Building on the needs of major research communities and establishing and retaining the necessary competence of future Nordic eScience research.
- **Consultation phase is about to start**

Action 5. Nordic Pilot Projects within Open Science

- Building on recent experience and activities, a few Nordic pilot research projects in a few strategically chosen fields will be initiated, including the full paradigm of open science in all phases of the establishment, implementation and reporting processes.
- **First Pilot: A small directed call to the new NCoEs within the Nordic program *Responsible Development of the Arctic: Opportunities and Challenges - Pathways to Action.***

Nordic eScience/eInfrastructure



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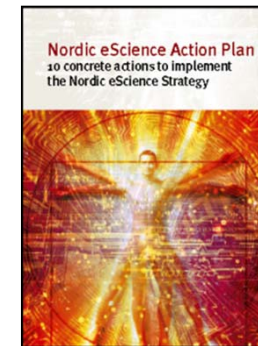
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Great future!



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Thank you for your attention!

<http://www.nordforsk.org/>

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